

QSI LASER DIODE

SPECIFICATIONS FOR APPROVAL

Customer :

Model : QL63F7S-A/B/C

TENTATIVE

Signature of Approval

Approved by _____

Checked by _____

Issued by _____

Approval by Customer



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QL63F7S-A/B/C

InGaAlP Laser Diode

Quantum Semiconductor International Co., Ltd.

Ver. 3 JUN. 2017

◆ OVERVIEW

QL63F7S-A/B/C is a MOCVD grown 635nm band *InGaAlP* laser diode with quantum well structure. It's an attractive light source, with a typical light output power of 10mW for optoelectronic devices such as Optical Leveler and Modules.

◆ APPLICATION

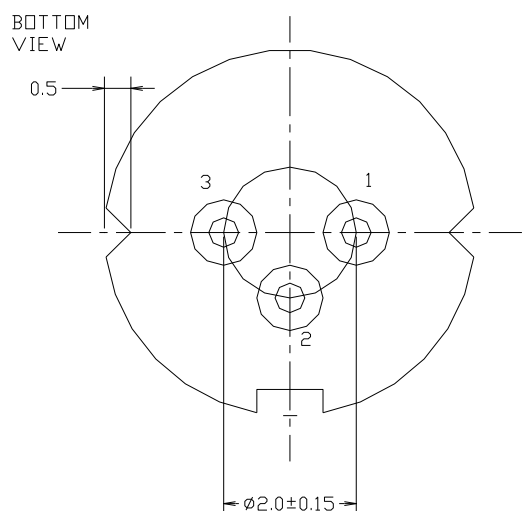
- Laser Pointer
- Bar Code Scanner
- Laser Module

◆ FEATURES

- Visible Light Output : $\lambda_p = 635 \text{ nm}$
- Optical Power Output : 10mW CW
- Package Type : TO-18 (5.6mm ϕ)
- Built-in Photo Diode for Monitoring Laser Diode

◆ ELECTRICAL CONNECTION

Bottom View



Pin Configuration

A	LD cathode, PD anode (Fig. 1)
B	LD , PD anode (Fig. 2)
C	LD anode, PD cathode (Fig. 3)

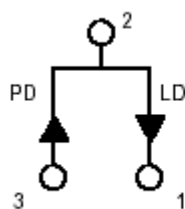


Fig. 1

QL63F7SA

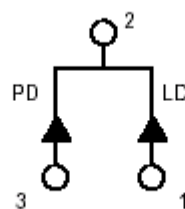


Fig. 2

QL63F7SB

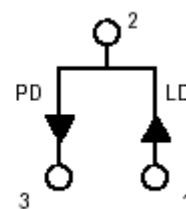


Fig. 3

QL63F7SC

◆ ABSOLUTE MAXIMUM RATING at Tc=25°C

Items	Symbols	Values	Unit
Optical Output Power	P	12	mW
Laser Diode Reverse Voltage	V	2	V
Photo Diode Reverse Voltage	V	30	V
Operating Temperature	Topr	-10 ~ +70	°C
Storage Temperature	Tstg	-40 ~ +85	°C

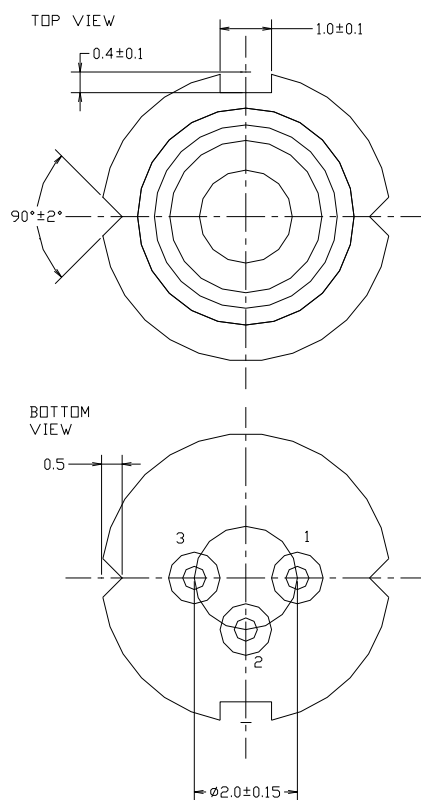
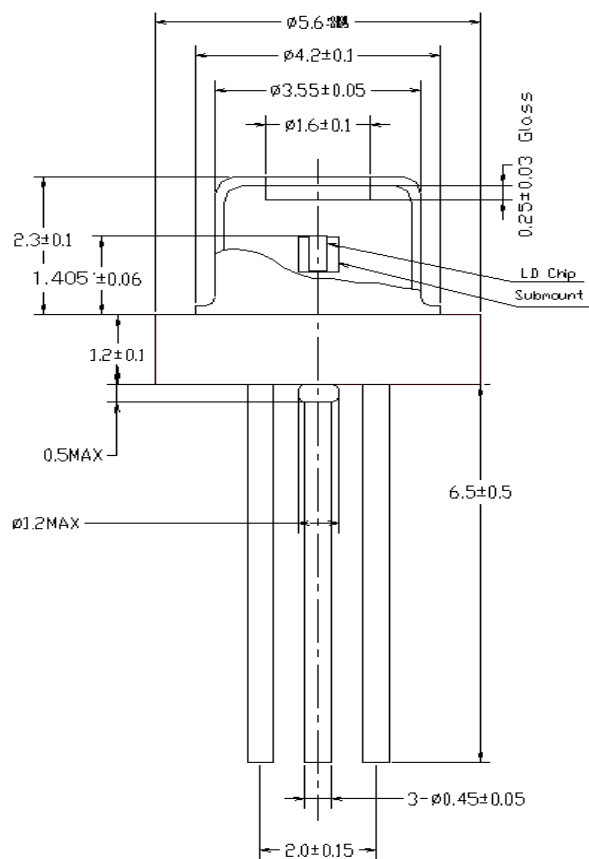
◆ ELECTRICAL and OPTICAL CHARACTERISTICS at Tc=25°C

Items	Symbols	Min.	Typ.	Max.	Unit	Condition
Optical Output Power	P _o	-	10	-	mW	-
Threshold Current	I _{th}	-	18	25	mA	-
Operating Current	I _{op}	-	28	40	mA	P _o =10mW
Operating Voltage	V _{op}	-	2.2	2.5	V	P _o =10mW
Slope Efficiency	SE	0.6	0.8	1.0	mW/mA	P _o =10mW
Lasing Wavelength	λ _p	-	638	645	nm	P _o =10mW
Beam Divergence	θ	6	9	12	deg	P _o =10mW
	θ _⊥	28	33	36	deg	P _o =10mW
Beam Angle	Δθ	-1.5	-	+1.5	deg	P _o =10mW
	Δθ _⊥	-2.5	-	+2.5	deg	P _o =10mW
Monitor Current	I _m	0.1	0.4	0.6	mA	P _o =10mW
Optical Distance	ΔX, ΔY, ΔZ	-	-	±60	μm	-

NOTICE : QL63F7S-A/B/C to be operated on APC

The above product specifications are subject to change without notice.

◆ PACKAGE DIMENSION



◆PACKING

